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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,147	01/31/2002	Michael R. Garrett	1662-50900 JMH (P00-3219)	8742
7590 11/09/2004			EXAMINER KOMOL, VAJIRACHAI	
JONATHAN M. HARRIS CONLEY, ROSE & TAYON P.O. BOX 3267 HOUSTON, TX 77253-3267			ART UNIT 2115	
PAPER NUMBER				

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/062,147

Applicant(s)

GARRETT ET AL.

Examiner

Vajirachai Komol

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show a computer system 100 [paragraph 17 and 19-21], graphics controller or video driver card 30 [paragraph 19], Advanced Graphics Port ("AGP") bus 32 [paragraph 19], display device 32 [paragraph 19], logic device 36 [paragraph 20], bridge device 36 [paragraph 20], ICH 36 [paragraph 20 and 22], firmware hub 46 [paragraph 22], "...pauses momentarily (step 58)" [paragraph 24], pausing (step 58) [paragraph 26], no label on items 24, 28 and 34, characters "100" [paragraph 17] and "20" have both been used to designate CPU, and character "22" has been used to designate both "host bridge" and "host bridge logic" [paragraph 17] as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the

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remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens (U.S. Pub. 2002/0133702) in the view of Tavallaei (U.S. Pat. 6,134,579).

Regard to claim 1, Stevens teaches a method of accessing a Basic input/output System (BIOS) routine [paragraph 1] comprising: requesting access of the BIOS routine by a software stream [paragraph 10 lines 4-5]; receiving an indication by the software stream of the results of the requesting step [paragraph 14 lines 1-2, results of the requesting step is determined by trust me function whether to grant access to the protected area or not]; and if the requesting step

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is successful using the BIOS routine by the software stream [paragraph 63 lines 9-12, requesting is successful when the trusted relationship has been established and granted access to the protected area]; and returning the BIOS routine by the software stream for use by other software streams [paragraph 63 lines 14-16, returning the BIOS routine appears to mean closing the BIOS routine/protected area]. However, Stevens does not disclose giving an exclusive ownership of a BIOS routine to the software stream. Tavallaei teaches giving an exclusive access to (or reserve) selected resources [col. 8 lines 39-40 and col. 9 lines 4-5] in order to prevent simultaneous access to non-reentrant hardware or software resource [col. 8 lines 41-42]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to provide Stevens with an exclusive access to selected resources, as taught by Tavallaei, in order to prevent simultaneous access to a non-reentrant hardware or software resource [col. 8 lines 41-42].

Regard to claim 2, Stevens further teaches the step of receiving an indication by the software stream of the results of the requesting step further comprises receiving an open handle by the software stream if the requesting exclusive ownership [exclusive ownership is taught by Tavallaei as discussed above] step is successful [paragraph 63 lines 9-12, receiving an open handle appears to mean granting access to the protected area].

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Regard to claim 3, Tavallaei teaches receiving a number representing a valid handle by the software stream if the requesting exclusive ownership step is successful [col. 9 lines 16-17].

Regard to claim 4, Tavallaei teaches receiving a number representing an invalid handle by the software stream if the requesting exclusive ownership is unsuccessful [col. 9 lines 12-16].

Regard to claim 5, Stevens further teaches the step of returning the BIOS routine by the software stream for use by the other software streams further comprises closing the BIOS routine by the software stream [paragraph 63 lines 14-16] such that the other software streams may be granted exclusive ownership [exclusive ownership is taught by Tavallaei as discussed above].

Regard to claim 6, Stevens further teaches the step of closing the BIOS routine by the software stream further comprises returning the open handle [paragraph 63 lines 14-16, returning the open handle implies denying access to the protected area cause by closing the protected area].

Regard to claim 7, Stevens teaches a computer system comprising: a microprocessor [paragraph 42 lines 1-2 and fig. 1 item 11]; a main memory array [paragraph 43 line 2 and fig. 1 item 13]; a first bridge logic device coupling the microprocessor and main memory array [paragraph 43 line 1 and fig. 1]; a

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graphics controller coupled to the first bridge logic device [fig. 1]; a video display coupled to the graphics controller [fig. 1 item 18]; a second bridge logic device coupled to the first bridge logic device by way of a primary expansion bus [paragraph 43 lines 2-5 and fig. 1 item 14]; a Read Only Memory (ROM) [paragraph 43 lines 10-11 and fig. 1 item 20] coupled to the second bridge logic device by way of a secondary expansion bus, the ROM storing Basic Input/output System (BIOS) routines [paragraph 48 lines 4-5 and fig. 2 item 27]; a software stream executed by the microprocessor, the software stream calls BIOS routines [paragraph 10 lines 1-5, calling process desiring access to the protected area]; and wherein the software stream requests of a BIOS routine prior to its use [paragraph 10 lines 1-5], and if the software stream is granted, the software stream use the BIOS routine [paragraph 10 lines 8-12]. However, Stevens does not disclose giving an exclusive ownership of a BIOS routine or returning the exclusive ownership. Tavallaei teaches giving an exclusive access to (or reserve) selected resources [col. 8 lines 39-40 and col. 9 lines 4-5] and returning the exclusive access [col. 9 lines 34-42, returning the exclusive access by making the resource available for the next process calling] in order to prevent simultaneous access to non-reentrant hardware or software resource [col. 8 lines 41-42]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to provide Stevens with an exclusive access to selected resources, as taught by Tavallaei, in order to prevent simultaneous access to a non-reentrant hardware or software resource [col. 8 lines 41-42].

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Regard to claim 8, Stevens further teaches the software stream is further adapted to request ownership again if exclusive ownership [as discussed above] is denied [fig4. items 44a, 44b and 44c].

Regard to claim 9, Stevens further teaches the software stream receives a valid handle to the BIOS routine if the software stream is granted an access of the BIOS routine [paragraph 74 lines 1-7].

Regard to claim 10, Stevens further teaches the software stream returns exclusive ownership [returns exclusive ownership is taught by Tavallaei as discussed above] by returning the valid handle [paragraph 75 lines 8-11, by returning the SETMAX address to its original boundary].

Regard to claim 11, Stevens further teaches the software stream receives an invalid handle to the BIOS routine if the software stream is not granted exclusive ownership [exclusive ownership is taught by Tavallaei as discussed above] of the BIOS routine [paragraph 60 lines 6-8, an invalid handle appears to occur when the system is not granted access to the protected area a consequence from the trusted relationship not being created].

Regard to claim 12, Stevens teaches in a computer system having a microprocessor executing a software thread [fig. 1 item 11], the software thread adapted to call Basic Input/Output System (BIOS) routines [paragraph 63 lines 2-



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5], a method of calling BIOS routines comprising: opening the BIOS routines by the software thread [paragraph 63 lines 9-14]; using the BIOS routines by the software thread [paragraph 63 lines 13-14]; and closing the BIOS routines by the software thread when the utilizing step is complete [paragraph 63 lines 14-16]. However, Stevens does not disclose the opening BIOS routines are exclusion of other software threads. Tavallaei teaches the step of giving an exclusive access to (or reserve) selected resources [col. 8 lines 39-40 and col. 9 lines 4-5, by giving an exclusive access to selected resource appears to mean the selected resource is exclusion of other hardware or software resource] in order to prevent simultaneous access to non-reentrant hardware or software resource [col. 8 lines 41-42]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Stevens's and Tavallaei's teaching in order to prevent simultaneous access to a non-reentrant hardware or software resource [col. 8 lines 41-42].

Regard to claim 13, Tavallaei teaches requesting exclusive ownership of the BIOS routines by the software thread [col. 8 lines 39-40 and col. 9 lines 4-5].

Regard to claim 14, Tavallaei teaches receiving an open handle if the requesting exclusive ownership step is successful [col. 9 lines 4-7 along with col. 9 lines 15-19, open handle appears to mean the resource is available for an exclusive access which can be represent by the value '0' [zero]].

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Regard to claim 15, Tavallaei teaches receiving an invalid handle if the requesting exclusive ownership step is unsuccessful [col. 9 lines 4-7 along with col. 9 lines 12-15, invalid handle appears to mean the resource is unavailable for an exclusive access which can be represent by the value '1' [one]].

Regard to claim 16, Steven further teaches the step of opening the BIOS routines by the software thread to the exclusion of other software threads [as discussed above] further comprises receiving an open handle if the opening the BIOS routines step is successful [paragraph 63 lines 9-12, receiving an open handle appears to mean granting access to the protected area].

Regard to claim 17, Stevens teaches returning the open handle [paragraph 61 lines 11-13 and paragraph 63 lines 13-16, returning the open handle appears to mean closing the service area and thus access to the protected area will be deny]

Regard to claim 18, Stevens discloses a computer system with a microprocessor [fig.1 item 11], main memory [fig. 1 item 13] and a read only memory storing Basic Input/output System (BIOS) routines [paragraph 48 lines 4-5 and fig. 2 item 27], a method of operating the BIOS routines comprising: receiving a request for permission to use the BIOS routines [paragraph 63 lines 5-7]; granting permission to use the BIOS routines [paragraph 63 lines 9-13]. However, Stevens does not disclose the step of checking whether permission

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has been previously granted and granting permission to use the BIOS routines if permission has not been previously granted. Tavallaei teaches the step of checking whether permission has been previously granted and granting permission to use the resource if it has not been previously granted [col. 9 lines 8-18] in order to prevent simultaneous access to non-reentrant hardware or software resource [col. 8 lines 41-42]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Stevens's and Tavallaei's teaching in order to prevent simultaneous access to a non-reentrant hardware or software resource [col. 8 lines 41-42].

Regard to claim 19, Tavallaei teaches returning a valid handle of the BIOS routines [col. 9 lines 16-18, a valid handle appears to include but not limited to the value '0' [zero]].

Regard to claim 20, Tavallaei teaches the step of denying permission to use the BIOS routines if permission has been previously granted [col. 9 lines 12-16, permission has been previously granted implies that the resource is not available or it is being use by other].

Regard to claim 21, Tavallaei teaches if permission has been previously granted further comprises returning an invalid handle of the resource [col. 9 lines 12-16, an invalid handle appears to include but not limited to the value '1' [one]].

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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vajirachai (Ben) Komol whose telephone number is (571) 272-5858. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on (571) 272-3667.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

V.K.



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PRIMARY EXAMINER  
11-1-04